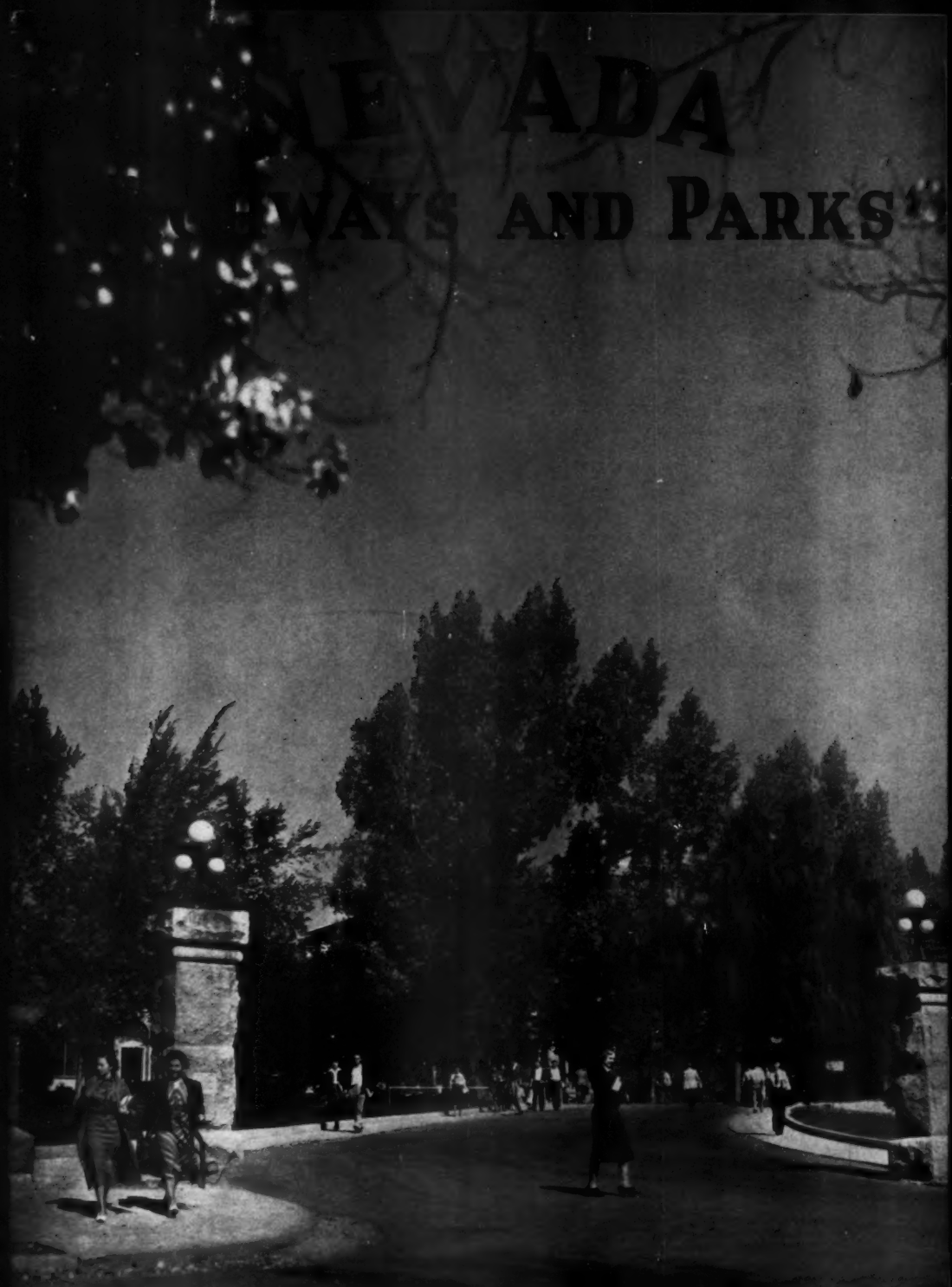
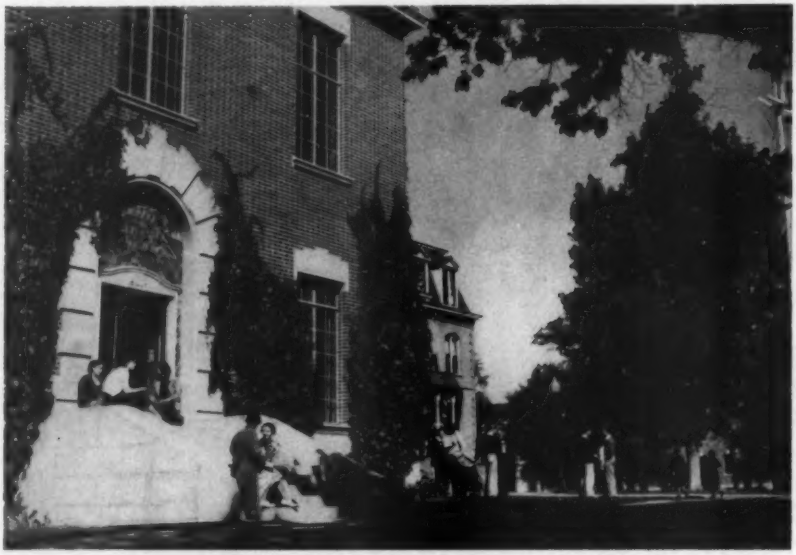
NEVADA
HIGHWAYS AND PARKS



PUBLISHED BY THE NEVADA DEPARTMENT OF HIGHWAYS
NOVEMBER 1937



The broad steps and spacious lawn in front of Alice McManus Clark Memorial Library afford popular meeting places for Nevada students. In friendly groups they discuss campus activities and studies while enjoying the warm noonday sunshine of an ideal October day.

This bronze statue of John W. Mackay, "The Man With the Upturned Face," serves as a daily inspiration to embryo mining engineers entering the imposing Mackay School of Mines Building in search of knowledge and proficiency in one of Nevada's important industries.

NEVADA HIGHWAYS AND PARKS

OFFICIAL BIMONTHLY PUBLICATION
NEVADA DEPARTMENT OF HIGHWAYS
CARSON CITY, NEVADA

VOLUME II NOVEMBER 1937 NUMBER 6

NEVADA UNIVERSITY CREDIT TO STATE

THE thrilling story of the great gold, silver and copper mines which the people of Nevada found in the heart of their mountains is more spectacular, no doubt, but scarcely more interesting than the story of the founding, progress and development of the University of Nevada. Despite the innumerable difficulties incident to its growth this "fresh water college" occupying a beautiful 60-acre spot in the northern section of Reno now has upon its registration books the names of more than 1,100 hopeful young women and men who started class work for the collegiate year 1937–1938, or the 52d year of the University's existence in the State's metropolis.

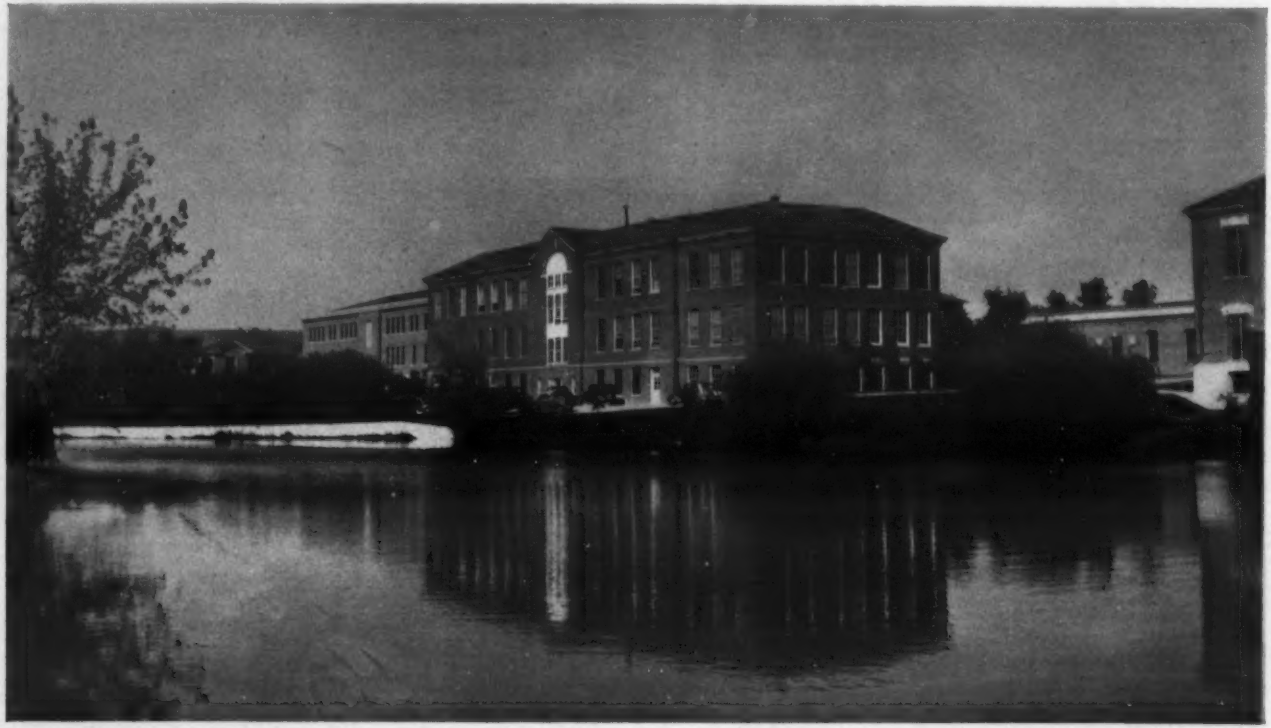
This is not a record for university enrollments by any means. In fact, it is comparatively small as to numbers. Nevertheless the high ideals, quality of student training, capability and efficiency of its faculty, democratic atmosphere, social life, and outstanding achievements which have proven of inestimable value and benefit to the State and its people are positive evidences of the substantial and persistent growth of an institution of learning, in a sparsely populated State, which had its inception and initial development at a time when the gold, silver and copper mines were absorbing almost the entire attention of the State's population.

In part, the story of the early days of Nevada's mines is a story of wild excitement and adventure, of men turned rich overnight beyond their wildest dreams. It is a story of fierce and crafty struggle for power, a story of widespread gambling and speculation, of poverty, greed and spendthrift generosity. Money at the time flowed like water and was often spilled with utter recklessness. All the faults and evils which dog the human race at one time or another ran wild through the settlements then building up on the glittering altars of gold and silver. Artificially sustained, the glitter and glamour ruled for a time, then began to fade. With its fading the mining industry, faced with reality, started on its long, steady, persistent course, tamed by reason and the fact that nature began to choke her purse and checked the flow of gold and silver production. The story of the University of Nevada lacks this spectacular dressing, having pursued a more conservative but more enduring course.

It has held and even enhanced its position and prestige as a university of high standards through the intervening years despite almost insurmountable obstacles. And yet its founding has a direct relationship with the wild, exciting mining era.

Beneath the veneer of metallic glitterings existing in Comstock days, there prevailed in the minds and hearts of many of those rough, hard men of the mines a longing

NEVADA, one State without an income tax, a corporation tax, an inheritance tax, a gift tax, a sales tax. With cheap power, and liberal mining, corporation, taxation, and other laws. WELCOME TO NEVADA.



Patterned in the shimmering waters of lovely Lake Manzanita and across the greensward of the University Campus stands the Agricultural Building as pictured in this northeast view. To its left, equally imposing, looms the Hall of Education. Both structures evidence a half-century of progress.

for better things; they yearned for things more enduring than the elusive golden fleece and its transparent baubles. They also possessed an insatiable desire for higher knowledge of all things, and more particularly about the very materials and riches they were, at the time, so laboriously and desperately digging from the ground.

Out of the maelstrom of questionable emotions and actions rampant during the pioneering era there arose the insistent urge to create and develop an institution for the broader education of the youth who were to follow in their footsteps.

For themselves, these brusque, muck-begrimed workers, the question of a university or college mattered little. They faced the world with what they had acquired through rough and tumble experience, ready for any adventure and fully capable of taking care of themselves according to the times. Physicially they were brave men, but they did appreciate their intellectual shortcomings. For their progeny they had every consideration and concern. Apparent selfishness only veiled an inherent and sincere unselfishness which eventually came to the surface.

While one of the richest gold strikes the Nation has ever known was in its zenith and the people of this far western State struggled for and demanded statehood, which eventually came into being, men were thinking of and planning for an institution of advanced learning with a high standard of quality. They likewise struggled for and attained that objective.

In the beginning Nevada was a part of Utah. It was known as Western Utah from 1850 to 1861, the year in which the Territory was organized. The territorial period ended in the days of the Civil War, in 1864, when, under President Lincoln, Nevada was admitted to the Union. The young State then went on its own. A school system of a sort had been established. It was fulfilling the requirements of rudimentary knowledge, but the wish that Nevada would ultimately have a university as the head of its future school system was deep rooted and very much desired. Population, finances, lack of communication and transportation, great unpopulated distances, and a woeful lack of

Graceful but wary, this swan seems highly perturbed that a mere man should encroach upon the sacred precincts of a girls dormitory. Veiled by the willows along Manzanita's shore this view shows Artemisia Hall with its campus front facing a bower of blooms and lawns.

Study hour in the library finds co-eds and undergraduate men busily engaged in absorbing knowledge on varied subjects. This library contains approximately 60,000 volumes, some of rare print, which are made available to the students for research and reference work.

Undergraduates absorbed in solving an electrical problem by practical application. Nevada's University provides ample equipment for a thorough training in this branch of science. Here the intricacies of a master switchboard are examined and studied by young engineers.

roads were a few of the many difficulties which had to be overcome before this achievement could be brought about. The State's Constitutional Convention of 1863 adopted sections providing for the establishment of a "state university or agricultural college with a mining department," and made provisions for a board of regents which was directed to establish the mining department from the interest on the first funds coming under their control. Mining, it is quite apparent, was always uppermost in the minds of the men who, only a few years prior, had known little or nothing of the industry, but because such an industry on a gigantic scale had been pitched into their laps they were wise enough to see the needs for knowledge concerning this subject.

The State constitution, which was adopted in 1864, made detailed provisions for a university and a state normal school, a board of regents to be elected by popular vote, and earmarked a special tax on all taxable property in the State for the support and maintenance of that institution.

Under the Morrill Act of 1862, Nevada was granted a total of 90,000 acres which, in addition to later Acts increasing this amount, formed the source of funds for the establishment of the University. A "University" was established at Elko and officially opened in 1874.

Before the opening of this school in Elko a number of new towns had sprung up overnight along the line of the recently completed Central Pacific Railroad—the first rail line to cross the entire width of the State. Of these towns the most important were Reno, established in 1868, and Elko, which had its beginning in 1869. In 1873 the population of both towns was probably not more than 1,000. After considerable discussion, by authority of the State Legislature, construction of the university buildings at Elko was begun and carried through the winter of 1873–1874. The first class enrolled for instruction consisted of seven pupils, and its curriculum could hardly be called more than a high school training. Struggling along for ten years, without making any appreciable progress, the school at Elko closed its doors on July 15, 1885.

OUR COVER ILLUSTRATION

THROUGH this gate, a much used entrance to the University of Nevada at Reno, pass the youth of this as well as many other States to carry on their prescribed years of training for proficiency in chosen fields of science. Surprising as it may seem to many, the beautiful university campus and plant differ vastly from what one might expect to see in the desert State.

In that year the intense excitement on the Comstock Lode was waning. The camp had had its day, and production in the mines decreased rapidly. Because there had been high hopes that the establishment and development in the University of a mining school would be of great help in solving the problems of that district, the fading out of the ores and the closing of the University proved a disastrous set-back to the advocates of the institution. As a result of a long period of agitation by the press of western Nevada and others interested in placing the University where they believed it could be most effective, the institution was then moved to Reno where the history of its collegiate instruction begins. The Board of Regents finally decided upon a level piece of bench land not far from the northern limits of Reno for a university site and a university building known as Morrill Hall was ready for occupancy by February 15, 1886. Doors of the school were opened to students for instruction March 31, 1886, under the charge of two men, one acting as principal of the preparatory department while the second was head of the department of assaying and mining engineering. During the first seven months 56 young men and women, ranging in age from 14 to 21, were registered.

In such a town as Reno in 1887 the problem of founding a university was indeed an extraordinary one. Reno was then a typical railroad town. Lumber camps and sawmills lay to the west in the forests of the Sierra Nevada mountains. Usually these camps operated in summer and closed during the winter. All winter long Reno was filled with lumberjacks, miners, sheepherders and cowboys; the rougher elements of the West drifted in and the problem of policing the rather turbulent village was one for strong men. There were no electric lights, telephones nor radios and, of course, the horse was the only motive power for personal transportation. Motion pictures had not yet started to flicker.

The year 1887 marked the beginning of many things for the University, among them being the publication of the first college newspaper—the "University Monthly," of 24

pages. There was founded by Act of Congress March 2, 1887, the Nevada Agricultural Experiment Station whose funds were destined for some years to play a very important part in the affairs of the University.

In spite of its struggle for existence under adverse conditions during the years, there had been established in 1890 the following divisions: School of Liberal Arts, School of Agriculture, School of Mechanic Arts, School of Mining, The Business Department, and the State Normal School. These courses form the foundation upon which the whole structure of the University of today has been firmly established.

Between 1890 and 1894, while the Nation passed through one of the worst depressions in its history, progress for the University was steady. Stewart Hall was completed; the State Mining Laboratory was also built; the first machine shop, which was constructed largely by the students themselves, was placed in service; extraordinary improvement was had in the University equipment, much of which was imported from Europe and of the very latest type.

The laboratories of the Agricultural Experiment Station had a great variety of apparatus which was used in classes of botany, entomology, chemistry, anatomy and physiology. The School of Mines had added a small stamp mill, roasting furnaces for assaying, and a balance room with exceedingly accurate and expensive scales, and the library had increased to more than 2,000 volumes at that time. Members of the faculty were well selected and represented a cross section of educational America from California through Ohio and Michigan to Harvard and to Princeton.

The first class was graduated from the newly located University in 1891 and consisted of three men.

The needs of the young University were many and the means at hand were small as it passed through the decade of 1894 to 1904. During this period the campus was enlarged, new buildings erected, and the scholastic work brought up to a much higher standard. Members of the faculty, which numbered 35, had also been drawn in closer relation with one another. The

In a setting of green, velvety lawns, broad-branching shade trees, beds of varicolored plants and blooming bushes, Manzanita Hall, one of the girls dormitories at University of Nevada, in Reno, affords pleasant surroundings, home comforts, and a delightful social atmosphere.

Looking northwest across the tree-bordered quadrangle of the campus with the Mackay School of Mines Building in the distance. The "quad" is a favorite place for student groups to meet and discuss their varied collegiate activities during lunch hour or between class time.

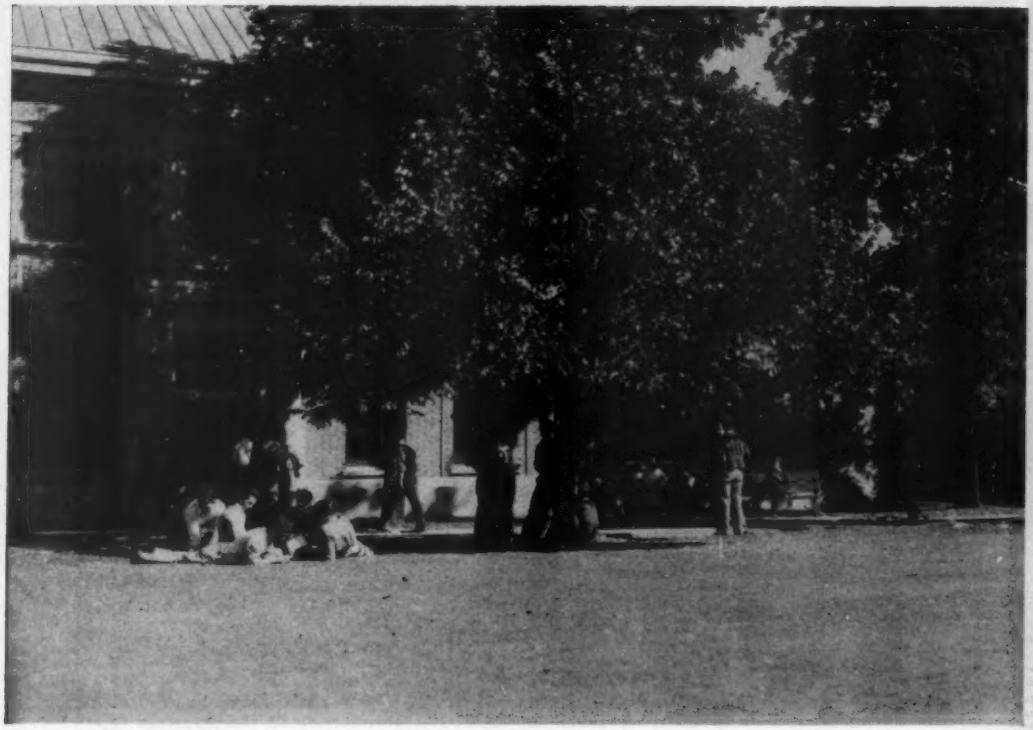
interval was also marked with a steady increase in enrollment. Within eight years it had nearly doubled. With the growth in numbers there also came the growth in organized student activities.

To add to the stabilizing progress of the institution the State Legislature in 1895 appropriated $38,000 for the purchase of additional land as a site for two modern college dormitories.

Early in 1898, the year of the Spanish-American War, the Athletic Association was organized. Football, baseball and basketball teams, and track athletics were selected and a surprisingly good showing was made by the Nevada players. The college annual, the "Artemisia," was first published by the class of 1899 and has continued ever since.

On the whole, during the period of 1894 and 1902 very important growth was made in campus and buildings. Twice in this period, however, fire destroyed in an hour the work of many years. The buildings so destroyed were the Mechanical Building and the Agricultural Experiment Station. Although this proved a severe loss to the established plant, the work of the university continued to grow in public confidence and esteem and served the people of the State in new directions.

During the ten years 1904 to 1914 a great change was brought about in the University's outlook through the generosity of the widow and son of one of the pioneers of old Virginia City, John W. Mackay. Nothing could have been more appropriate or more timely than their assistance. Having in view the erection of a suitable memorial to John W. Mackay, his widow and son planned to erect a monument of service to the State which had been the scene of his early life and his first great success. This was the thought which inspired the gift, and the thought was made real in 1908 by the erection of the Mackay School of Mines Building and by the Mackay Memorial Statue. The statue which stands at the north end of the campus quadrangle is affectionately referred to by students and citizens alike as "The Man with the Upturned Face." It symbolizes the spirit of always looking up, a spirit which has led the University to its present high status. The figure in bronze represents the pioneer miner clad in the rough garb of his work, holding



Campus Life

ON these two pages are shown campus scenes at the University of Nevada located "on the hill" in the northern section of the city of Reno. Beautiful, well-kept grounds, substantial and modern buildings, a student body numbering approximately 1,100, which is given the maximum individual student attention by an adequate and efficient faculty, has brought the scholastic standard and quality of this institution to a degree comparable with the larger eastern colleges. Upper left, groups of students on the lawn in front of the Engineering Building; lower left pictures a co-ed student of the mining engineering class demonstrating the operation of a model ore-crushing mill of the five-stamp type in the Mackay School of Mines; upper right, the Mackay Science Hall; lower right, a view looking northeast across beautiful Manzanita Lake.

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Manzanita Hall with its closely-cropped hedge, clinging vines, and framed by broad branching trees, presents a lovely picture when viewed from the campus green near the Library. Enhanced by a soft, delicate reflection in the still waters of the lake this girls dormitory shows dignity and beauty.

A group of co-eds in the School of Home Economics deeply absorbed in the solution of a problem in dressmaking and sewing through practical application. Women graduates in this school prepare themselves to be homemakers, teachers, dietitians, and extension workers.

a piece of the Great Bonanza ore in one hand and grasping a pick with the other. The eyes are lifted toward the peaks of the mountains about Virginia City to the southeast, where the statue's living counterpart dug a fortune from the rocks.

Mackay School of Mines became a source of both assistance and inspiration to the University and to the State. Clarence Mackay, the son, saw at once how necessary it was that the campus should provide a fit setting for the building and the memorial statue honoring his father. Engineers and landscape gardeners were called into service and the old parade grounds of the earlier days was transformed into a quadrangle which grew in dignity and beauty as the years passed. Both building and memorial statue were dedicated on Commencement Day, June 10, 1908. In the following year Mackay Field and Training Quarters was dedicated. The field had been conditioned and the training quarters erected through the generosity of Clarence Mackay. Since its inauguration into service this stadium has become the center of all University athletic activities.

Two years later the State provided funds for the erection of an electrical building second only to the Mackay School of Mines in usefulness and architectural beauty. In another two years there came a change in the administrative system. The increased endowment had brought about an increase in the faculty and the dean system of administration was instituted. This plan worked well from the beginning and has been in successful operation to the present day. The four-year period of 1914–1917 passed through a condition of change. Enrollment at the school increased, new buildings were added to the established plant, the campus was made more beautiful in its entirety, and the work achieved by all branches of the university placed on a very high standard of quality.

Outstanding events affecting the campus during the period 1920–1930 included organization of the School of Education, establishment of an Engineering Experiment Station, celebration of the semicentennial of the founding of the University, enlargement of the Mackay School of Mines, together with added modern equipment, and dedication of the Alice McManus Clark Memorial Library.

A group of co-eds partaking of a bit of lunch and refreshments and learning the art of service while discussing their Home Economics problems. A Home Economics Club, composed of students and faculty, develops friendship, cooperation, and leadership among its members.

This library was a gift to the University by the late Wm. Andrews Clark of Montana as a memorial to his wife who was born in Virginia City, Nevada. It is the real center of life at the institution.

Dedication of the Mackay Science Hall, in which the departments of chemistry, physics and mathematics are located was a stellar event in the University's history in 1930. One year later the lands and buildings of the Nevada Historical Society were transferred to the University's administration.

Within recent years additional substantial endowments have come to the University of Nevada. Of the larger gifts, that of S. Frank Hunt heads the list of benefactors. Frank Hunt was the discoverer of a huge copper deposit at Rio Tinto in northern Elko County, Nevada.

Under the present administration the University has expanded until it includes the College of Agriculture with its School of Home Economics and its School of Agriculture, in addition to an experimental farm a few miles distant from the campus. These units are supplemented by the activities of the Agricultural Experiment Station which conducts research into agricultural problems.

Available to the prospector and miner of Nevada are two services which have modernized and developed the mining industry until, in many respects, it is the most scientific anywhere to be found. The State Analytical Laboratory and the State Bureau of Mines have proved of great value to the citizens through their service of analysis of ores and minerals taken from within the State boundaries. Thousands of specimens are received at the laboratory for analysis and assay each year. This service is given gratis.

Another important unit of the University is the Hygienic Laboratory which provides facilities for the diagnosis and control of infectious diseases. The Pure Foods and Drugs Laboratory is operated within the Department of Weights and Measures; the State Veterinarian Control Service treats with the diseases of domesticated animals.

Mackay School of Mines is a unit of the College of Engineering which also includes the Schools of Civil Engineering, Mechanical Engineering and Electrical Engineering. Adjunctive to this School is the Mackay Museum where the thousands of specimens

and samples of minerals and metals of all kinds are housed, classified, and labeled for public inspection. This collection, including some privately owned units, is one of the finest in the country and contains many beautiful gem stones, rich ore specimens, as well as rare minerals, found, not only in Nevada, but in all parts of the world. Historic relics, documents and newspapers relevant to the Comstock Lode, as well as other mining districts, are supplemented by a comprehensive library relating to mining and geological work. These valuable exhibits are enhanced by a very rare collection of old photographic prints showing many phases of mining in the early days and occupy prominent places in the School of Mines Building.

The College of Arts and Science at the University enjoys the largest enrollment. Within that college professional training in business, journalism, chemistry, teaching and other lines is offered. A special division classified as the School of Education and Nevada State Normal School, where teachers are prepared for grade and high school instruction, has had much to do with the high educational standard in the State, in spite of the sparse and scattered population.

One of the greatest struggles has been to raise the University from less than a preparatory school to the academic standards of the best universities in the country. This was accomplished in 1920 when Nevada was placed on the Approved List of the Association of American Universities. Since then standards have gone up still higher until today no student can enter Nevada University from outside the State who is not prepared to enter the very best universities in the Nation.

CORRECTION

In our September issue caption lines on page 9 stated that the "cattle drive" photograph was taken on the open range in Elko County. This was in error. Actually the photograph was taken two miles east of Winnemucca, along the Humboldt River, in Humboldt County (not Elko County)—THE EDITOR.

A University of Nevada graduating class making its annual pilgrimage to the hallowed places on the campus. Here they have assembled for the ceremonial at the Haseman Memorial Bench. The Alice McManus Clark Memorial Library Building shows in the background.

Before the Las Vegas underpass was constructed there existed an unsightly as well as a dangerous railroad crossing at the site shown in the above illustration. The view looks west toward the intersection and marks the proposed line for the new highway safety project.

TRAFFIC UNDERPASS AIDS LAS VEGAS

ELIMINATING a dangerous railroad crossing at grade in one of the busiest sections of a rapidly growing western city, and joining two closely related districts with safer traffic lanes, the new Clark Avenue underpass with its approaches under the Los Angeles and Salt Lake Railroad in Las Vegas was completed by the Nevada Department of Highways, dedicated by the citizens of the community, and then placed in general service during the early part of August. Completion of the project marks the first major structure of its kind in southern Nevada. Besides establishing an important highway safety factor within the city it affords improved facilities for an increasing heavy traffic over the highways leading to the Charleston Park recreational area northwest of Las Vegas and, in a broader sense, forges another safety link in the north and south arterial coursing the full length of the State. This arterial, known as Nevada No. 5, is the hard-surfaced route serving the eastern entry to Death Valley, the historic mining camps of Tonopah and Goldfield, as well as the northern part of the State.

Classified as a Works Program Grade Crossing elimination project within metropolitan areas the underpass was constructed of concrete and steel, has a length of approximately one-fifth of a mile, with ample width for two traffic lanes and pedestrian sidewalks. The structure affords unimpeded travel into and out of the southern Nevada city of destiny with a maximum degree of safety.

With architectural treatment along modern lines the Clark Avenue underpass has a road surface width of 24 feet from curb to curb, and is equipped with sodium vapor units for night lighting.

Construction costs approximated $200,000. Underpassing three Union Pacific tracks which includes the main line between Salt Lake City and Los Angeles, the structure is considered one of the outstanding achievements of highway safety development in southern Nevada by reason of its safeguards to motorists in the entire Las Vegas area.

Design of the project was carried out by the engineering department of the railroad company, but the designing work was paid for by the State. Funds for construction were provided by the Federal Government under Acts authorizing construction of such highway projects. Actual work was carried out by private contract. Maintenance cost of the structure will be absorbed by the State.

Opened for public use August 6, the new structure affords travel facilities in striking contrast to those existing in the struggling desert community at the beginning of the present century. Deep ruts with deeper dust, plenty of mud following the occasional rains, and high weeds marked the route at the location of the new structure during that time. Las Vegas was a one-street town struggling for existence and entertaining dreams of better roads some day. That day, however, which seemed vaguely in the future, has now arrived, and good roads in the district are an accomplished fact.

At the dedication ceremonies, during which several thousand persons were present, addresses by prominent citizens of the district were made, which pointed out the advantages to be derived from the new structure. Several of the speakers, who had been citizens of Las Vegas since its very beginning, recalled vividly that Nevada, at that time, was seething with excitement because of sensational gold strikes at Tonopah and Goldfield, many miles and many days travel to the north.

Since the beginning of the century Las Vegas has struggled through a period of development, growing slowly and haphazardly. It was not until the great Boulder Dam project became a live issue and later took definite shape and substance that the southern Nevada town became dam, mineral and power conscious and realized its strategic position in an extensive district vastly rich in mineral resources, besides being completely encircled by a scenic wealth almost unbounded.

Las Vegas—literally translated "The Meadows"—has grown into a modern city of enthusiastic citizens, a very sizable community when one considers its desert locale with a sun that sweats the mercury in thermometers above the 100 degree mark in summer.

The completed underpass structure looking toward the west in southern Nevada's "City of Destiny." Sodium lamps for night lighting and a two-lane hard-surfaced road make this major highway safety project one of outstanding importance in the Boulder Dam area.

Mild and delightful winters, with infrequent snow and freezing temperatures compensate for this summer extreme, however, and make the district an ideal winter resort.

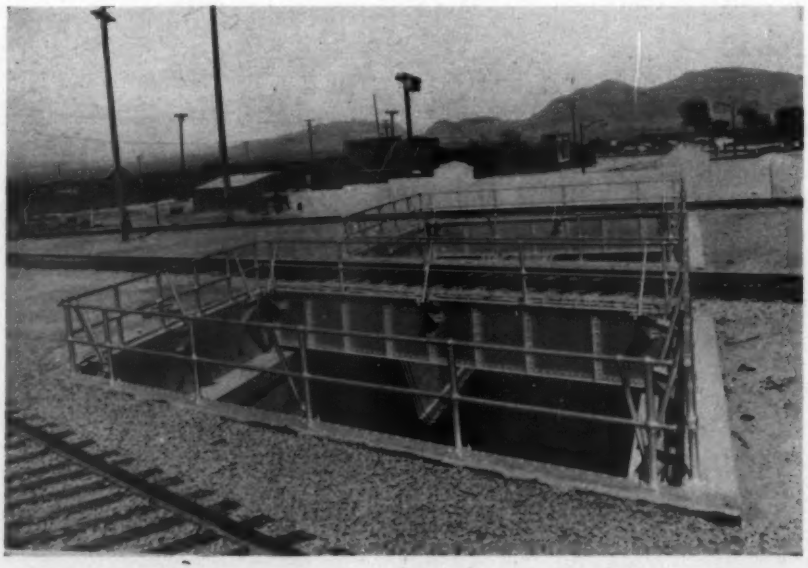
The Colorado River streams down its tortuous course about 20 miles southeast from the city. When the great Boulder Dam project emerged from its hazy dreamland stage and entered the realm of realism, "Vegas" became the center of operations by the United States Reclamation Service and retained this position until the Government constructed Boulder City adjacent to the dam site. Las Vegas, however, retained its prestige and importance because of its better transcontinental rail and highway location.

Boulder Dam project was completed in 1936. This brought under control a river which drained hundreds of thousands of square miles of land in Wyoming, Utah and Colorado, and at the same time removed an annual spring and early summer nightmare from the minds of thousands of persons living in the Imperial and other lower river valleys.

Quite as important to the flood control of the river by Boulder Dam is the generation of great quantities of electrical energy at the power houses nestling in the canyon crotch below the dam. This power supply now becomes available for distribution to expanding industries and augurs well for a rapid development of the vast mineral resources known to exist in the district.

The Clark Avenue underpass within the city is only a small unit, but an important one, in the far-reaching scheme for this future development and marks a decided progressive step in highway safety which fits in admirably with the expected greater development. With a capacity for service gauged on a broad future expansion the Clark Avenue underpass will facilitate safe travel within the city as well as adjoining districts for many years to come.

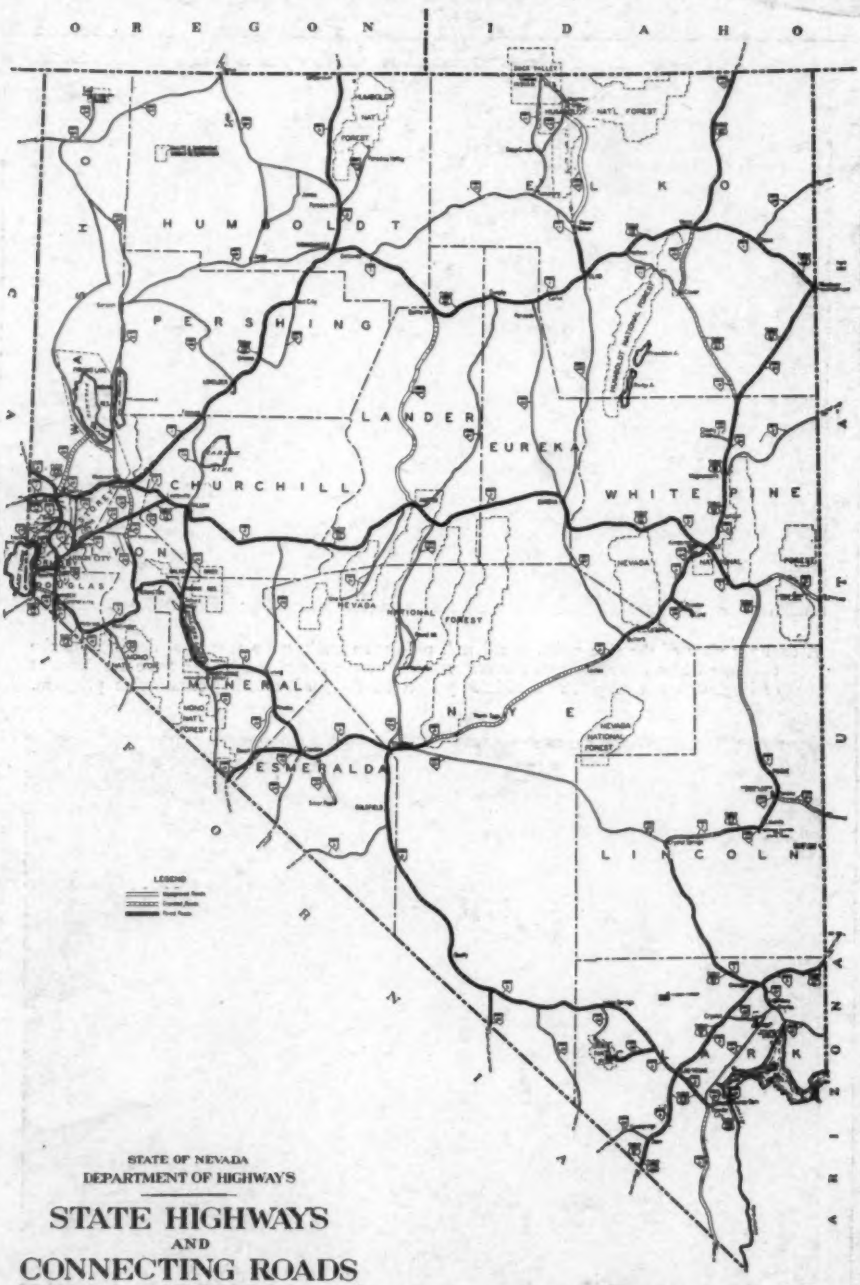
Contract for the structure was awarded on August 28 and the first work started on September 17 of last year. Shortly after the start of the construction work the contractors ran into a delay of 57 days due to the coastwise shipping strike on the Pacific coast which tied up large shipments of needed steel.



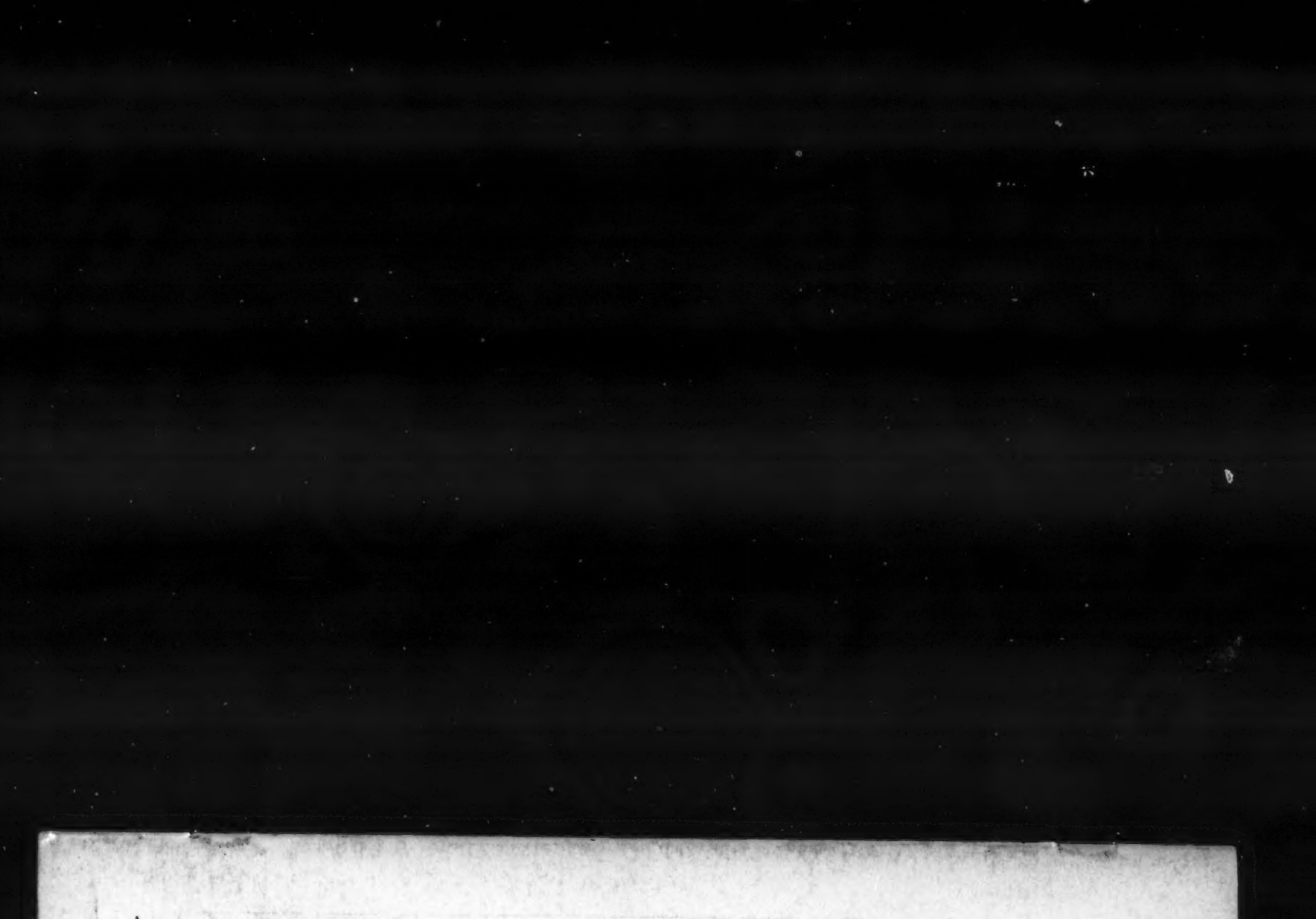
Track level details with the steel girder spans, guard rails, and main-line tracks of the Union Pacific are pictured above. The underpass, a grade elimination project, was completed last August and connects two sections of Las Vegas, Nevada, a fast growing western city.

A daylight view of the side walls, guard rail, pedestrian walk, main structural details, and the two-lane traffic drive through the underpass structure completed by the State Department of Highways last August as a Federal project on the grade-crossing elimination program.

A striking night view of the completed structure of the Las Vegas underpass which brings in sharp relief the traffic lanes, overhead structure, guard rails and pedestrian walks. Sodium vapor lights provide an added safety factor to night driving through this new underpass.



STATE OF NEVADA
DEPARTMENT OF HIGHWAYS

STATE HIGHWAYS
AND
CONNECTING ROADS

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